
PHASE I ENVIRONMENTAL SITE ASSESSMENT

ST. PAUL SCHOOL ST. PAUL ISLAND, ALASKA



Prepared for



National Oceanic and Atmospheric Administration
7600 Sand Point Way NE
Seattle, Washington 98115

Prepared by



Tetra Tech EM Inc.
6100 219th Street SW, Suite 550
Mountlake Terrace, Washington 98043

August 24, 2004

TETRA TECH EM INC.

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CONTENTS

<u>Section</u>	<u>Page</u>
EXECUTIVE SUMMARY	1
SECTION 1 INTRODUCTION	1
1.1 SCOPE OF WORK	1
1.2 PURPOSE	1
1.3 INVOLVED PARTIES	2
SECTION 2 PROPERTY DESCRIPTION	3
2.1 LOCATION.....	3
2.2 PHYSICAL SETTING.....	3
SECTION 3 HISTORIC REVIEW	7
3.1 CITY DIRECTORIES.....	7
3.2 SANBORN™ FIRE INSURANCE MAPS.....	7
3.3 HISTORICAL PHOTOGRAPHS	7
3.4 GENERAL	8
SECTION 4 SITE RECONNAISSANCE.....	9
4.1 CURRENT DISPOSITION OF SUBJECT PROPERTY	9
4.2 CURRENT DISPOSITION OF ADJACENT PROPERTIES.....	10
4.3 INTERIOR STORAGE AND WASTE DISPOSAL AREAS	10
4.4 INTERIOR DISCHARGES	11
4.5 EXTERIOR STORAGE AND WASTE DISPOSAL AREAS	11
4.6 EXTERIOR DISCHARGES	11
4.7 STORAGE TANKS	12
4.8 POLYCHLORINATED BIPHENYLS	13
SECTION 5 REGULATORY RECORDS REVIEW	14
SECTION 6 CONCLUSIONS AND RECOMMENDATIONS	17
SECTION 7 LIMITATIONS	18
SECTION 8 REFERENCES	19

FIGURES

<u>Figure</u>	<u>Page</u>
1 SITE LOCATION MAP	5
2 SITE PLAN	6

APPENDICES

Appendix

A	SITE PHOTOGRAPHS
B	HISTORICAL PHOTOGRAPHS
C	CHEMICALS IN SCIENCE LAB

EXECUTIVE SUMMARY

Tetra Tech EM Inc. (Tetra Tech) received a statement of work (SOW) dated March 22, 2004, from the National Oceanic and Atmospheric Administration (NOAA) under Contract No. WC133F-04-CQ-0003 to prepare a Phase I Environmental Site Assessment (ESA) at the St. Paul School (the property) in St. Paul, Alaska (Block 17, Lots 9,10,11,12,13A, 14A, and 15A, Tract A, all within Section 25, Township 35S Range 132W). The property boundary is preliminary and still under negotiation between NOAA and local entities on St. Paul Island. The ESA was conducted based on the site boundaries presented in the NOAA Statement of Work dated March 22, 2004. The ESA was conducted in accordance with American Society for Testing and Materials (ASTM) Practice E1527-00, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

The results of this investigation represent a review of current conditions based on available information and limited observations. In addition to conducting a site reconnaissance, Tetra Tech performed a detailed review of historic records available from Federal and State databases, and obtained historic records information from the current property owner, NOAA.

The first known use of the property began prior to 1948, when the Butler Building, a carpenter shop, was in existence on the property. The Butler building was converted into a plumbing shop in the 1950s and then was demolished in 1967. In 1971, the school building was constructed on the property. Around 1978, the school building was partially destroyed in a fire and was subsequently rebuilt into the school building that currently exists on the property.

The assessment revealed the presence of two recognized environmental conditions in connection with the property.

- According to persons interviewed during the Phase I ESA, small quantities of chemicals associated with the science laboratory are diluted and discharged through sink drains, which ultimately discharge to the Bering Sea.
- According to persons interviewed during the Phase I ESA, the ultimate disposition of a diesel fuel underground storage tank (UST) cannot be determined. Several village elders interviewed by the City Clerk on behalf of the site assessor mentioned that the UST may have been abandoned in place. Others believe that UST has been removed.

SECTION 1 INTRODUCTION

Tetra Tech EM Inc. (Tetra Tech) received a statement of work (SOW) dated March 22, 2004 from the National Oceanic and Atmospheric Administration (NOAA) under Contract No. WC133F-04-CQ-0003 to prepare a Phase I Environmental Site Assessment (ESA) at the St. Paul School in St. Paul, Alaska (Block 17, Lots 9, 10, 11, 12, 13A, 14A, and 15A, Tract A, all within Section 25, Township 35S, Range 132W). The ESA was conducted in accordance with American Society for Testing and Materials (ASTM) Practice E1527-00, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM 2000).

1.1 SCOPE OF WORK

The purpose of the ESA was to identify potential areas of environmental concern associated with the subject property. Resources that Tetra Tech used in conducting the ESA include ASTM Practice E1527-00, public documents, Federal and State database access, visual inspection of the subject and surrounding properties, and interviews with persons knowledgeable about historic activities at the subject property.

This ESA is based on available information pertinent to the subject property and results of a walk-through site inspection. Where potential areas of environmental concern are identified, this report will recommend methods for obtaining confirmatory evidence of these concerns, including additional research, investigation, or collecting soil, sediment, surface water, or groundwater samples.

1.2 PURPOSE

The purpose of this ESA is to identify whether recognized environmental conditions are present on the subject property within the scope of work conducted as found in Section 1.1.

Recognized environmental conditions are defined as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a historic release, or material threat of release of any hazardous substance or petroleum product into structures on the property or to the ground surface, subsurface soil, groundwater, or surface water of the

subject or adjacent properties. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

1.3 INVOLVED PARTIES

Tetra Tech was contracted by NOAA, trustee for the subject property, to perform an ESA. Ms. Phyllis Swetzof (City Clerk for the City of St. Paul) and Mr. Mac Mandregan (Maintenance Director for the St. Paul School) were interviewed regarding the environmental condition of the subject property. In addition, Mr. Greg Gervais and Mr. Dave Winandy (NOAA Office of Response and Restoration [ORR]) as well as Mr. Tom Simon (NOAA Office of Environmental Safety and Compliance [OESC]) were consulted regarding historical records for the subject property. Ms. Swetzof, in an effort to gather additional information after the initial site assessment reconnaissance, interviewed several village elders to fill data gaps identified during the reconnaissance. The Alaska Department of Environmental Conservation (ADEC) online Contaminated Sites Database (CSD) was reviewed with regard to state environmental records for the subject property, as well as other potential contaminated sites on St. Paul Island.

SECTION 2

PROPERTY DESCRIPTION

The following sections describe the subject property and adjacent properties as observed by Tetra Tech personnel during the April 20, 2004 site inspection, a subsequent site visit on July 27, and upon review of applicable maps and records. Figure 1 depicts the geographical location of the site, and Figure 2 provides detail of the subject property. Photographic documentation of the field inspection is presented in Appendix A.

2.1 LOCATION

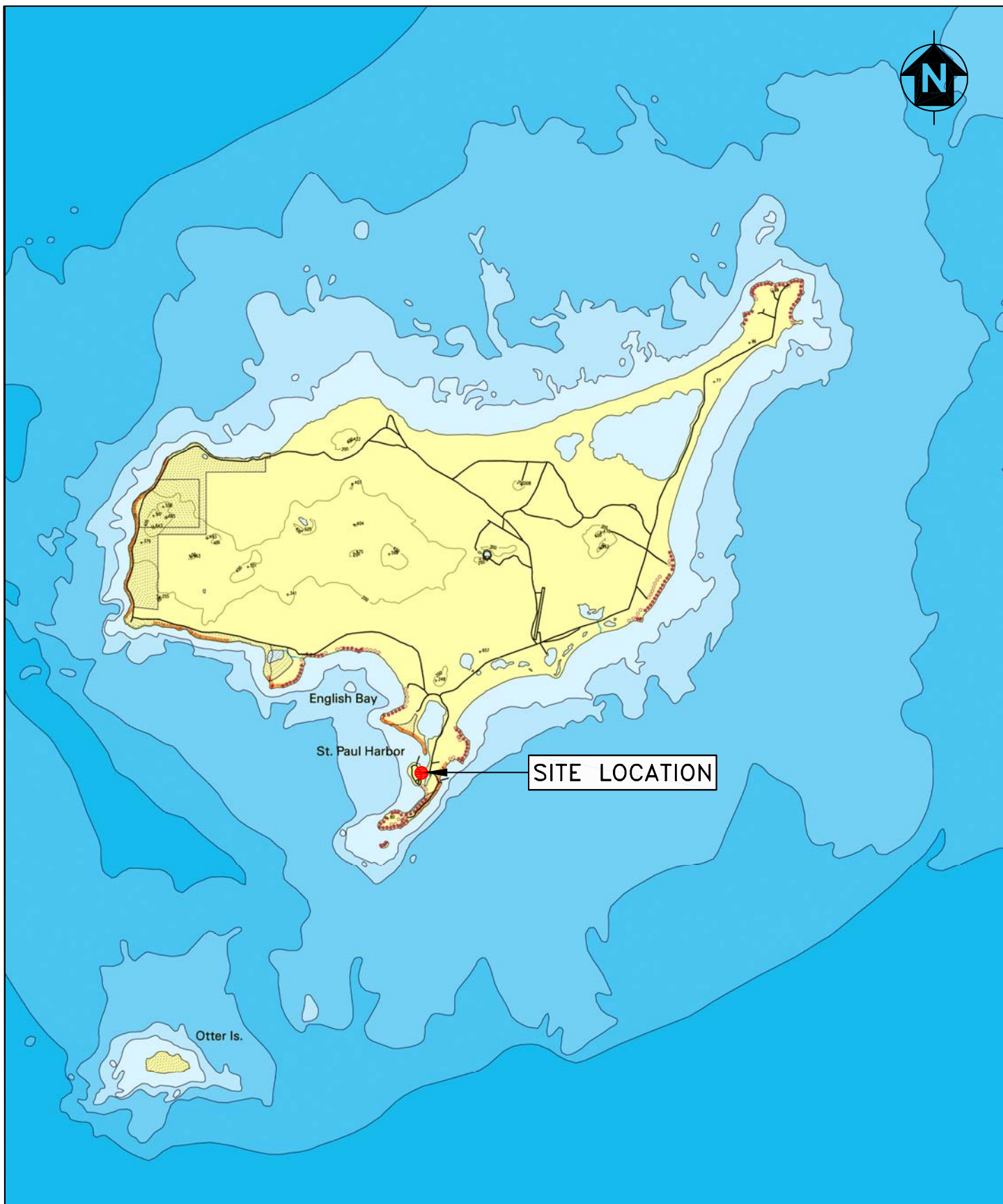
St. Paul Island is part of the Pribilof Islands, a small island archipelago located in the Bering Sea approximately 800 miles west-southwest of Anchorage and 300 miles north-northwest of Dutch Harbor, Alaska. The City of St. Paul is situated on a peninsula in the southern portion of the island. The subject property is centrally located in the City of St. Paul, and occupies Block 17, lots 9, 10, 11, 12, 13A, 14A, and 15A, Tract A, all within Section 25, Township 35S, Range 132W, St. Paul, Alaska. Coordinates for the subject property are latitude 57.1206° north and longitude 177.7206° west.

2.2 PHYSICAL SETTING

St. Paul Island covers approximately 44 square miles and was created as the result of volcanic activity. The climate of the island is classified as subpolar, with weather conditions heavily influenced by the Bering Sea. Vegetation on the island is broadly classified as moist tundra. St. Paul Island is also well known for wildlife, including fur seals, northern (Steller) sea lions, harbor seals, reindeer, and numerous bird species.

The subject property is located centrally in the City of St. Paul, at the intersection of Tolstoi Boulevard and Bartlett Boulevard, and is zoned as institutional. The subject property is approximately 3 acres in size and contains the St. Paul School building. The property also contains an AST used for the storage of heating oil for the school, a playground, several light poles, and a parking area. Topographically, the subject property is situated at the base of Village Hill, at the intersection of Tolstoi Boulevard and Bartlett Boulevard in the City of St. Paul. The surrounding areas slope downward and away from the site to the north and east, upward toward Village Hill to the west, and remains fairly flat to the south.

No private or public groundwater wells are located on the subject property. A total of seven groundwater wells are used to supply water for the City of St. Paul; however, these wells are all located approximately 2.5 miles north of the subject property in the vicinity of Telegraph Hill.



1.25 0 1.25 2.5
APPROXIMATE SCALE IN MILES

FIGURE 1

SITE LOCATION MAP
ST. PAUL SCHOOL AREA
ST. PAUL ISLAND, ALASKA

 TETRA TECH EM INC.



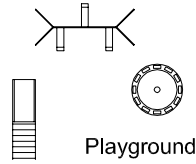
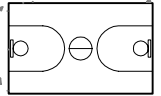
TOLSTOI BOULEVARD

BARTLETT BOULEVARD

Scoria-covered
Parking Area

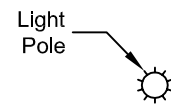
Activity Center
(across street)

Basketball
Court



Playground

AST

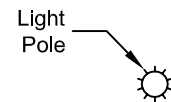


Light
Pole

Undeveloped
Land

Entrance

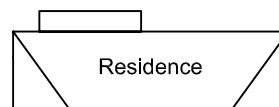
School
Building



Light
Pole



Residence



Residence

FIGURE 2

SITE PLAN
ST. PAUL SCHOOL AREA
ST. PAUL ISLAND, ALASKA

NOT TO SCALE

 TETRA TECH EM INC.

SECTION 3 HISTORIC REVIEW

During an ESA, several types of records commonly are reviewed to evaluate the subject property's historic uses. Often, sources of valuable historic use data include city directories, SanbornTM fire insurance maps, and aerial photographs. Because these types of information are limited in rural Alaska, interviews with knowledgeable persons familiar with historic site activities were relied upon to supplement available records pertaining to the subject property.

The following sections summarize city directory listings for the subject property, historical photographs, and other general information obtained during the ESA process.

3.1 CITY DIRECTORIES

No city directories were available for the subject property.

3.2 SANBORNTM FIRE INSURANCE MAPS

No SanbornTM Fire Insurance Map coverage was available for the subject property (EDR 2001b).

3.3 HISTORICAL PHOTOGRAPHS

Historical photographs, including aerial photographs, were obtained from records compiled by Mr. Greg Gervais (NOAA ORR). Historical photographs of the subject property were reviewed for the years 1996, 1995, between 1982 and 1973, 1967, and 1948. Copies of the historical photographs are included in Appendix C. Results of the historical photograph review are as follows:

- **1996.** This photograph shows the school building currently located at the subject property. Other properties within the vicinity of the subject property are generally shown as exhibiting current conditions.
- **1982.** This photograph shows the school building currently located at the subject property. Two small structures of unknown use are visible on the adjacent property to the east. Other

properties within the vicinity of the subject property are generally shown as exhibiting current conditions.

- **1973.** From this photograph, it appears that the school is still under construction at the subject property. Surrounding property to the south and east is undeveloped. Other properties within the vicinity of the subject property are generally shown as exhibiting current conditions.
- **1967.** From this photograph, it appears that the Butler Building has been demolished, but construction on the school has not yet begun. Surrounding property to the south and east is undeveloped. Other properties within the vicinity of the subject property are generally shown as exhibiting current conditions.
- **1948.** The photograph shows the Butler Building and a second building in existence at the subject property. The nature of the second building could not be determined through exhaustive interviews with village elders and others knowledgeable about St. Paul history.

3.4 GENERAL

Historical information related to the subject property indicates that a building known as the Butler Building was the first structure in existence at the subject property (Huey 1956). According to Mr. Winandy (NOAA ORR), the building was used as a carpenter shop from at least 1938 until the 1950s, when it was converted into a plumbing shop. The building was demolished in 1967, and the St. Paul School was constructed at the site in 1971. According to Ms. Swetzof (City Clerk for the City of St. Paul) and Mr. Mac Mandregan (Maintenance Director for the St. Paul School), the school building was partially destroyed in a fire in 1978 and was subsequently rebuilt into the school building that currently exists on the property. The current use of the property is as a school.

SECTION 4

SITE RECONNAISSANCE

During the ESA process, a site reconnaissance is conducted, and due diligence is exercised in identifying potential areas of environmental concern. The site reconnaissance focuses on evaluating the current disposition of the subject property and adjacent properties, interior storage and waste disposal areas, interior discharges, exterior storage and waste disposal areas, exterior discharges, storage tanks, and polychlorinated biphenyls (PCB).

Tetra Tech personnel performed the field inspection of the subject property on April 20, 2004. Because several data gaps were identified, Tetra tech personnel revisited the property on July 27, 2004.

4.1 CURRENT DISPOSITION OF SUBJECT PROPERTY

Purpose and Scope: During an ESA, the subject property is inspected to evaluate the general condition of the buildings and structures. General observations are made about the buildings and structures on the subject property, as well as their location, size, and apparent usage. Construction features, such as ceilings and floors, are noted, as is the presence and type(s) of light fixtures and electrical equipment. Also noted are other features and anomalies that may contribute to environmental contamination. Topography, vegetation, and proximity to thoroughfares and waterways also are observed during the inspection.

Observations: The subject property is currently occupied by a school building. An aboveground storage tank containing heating oil for the school exists on the property, adjacent to the school on the northwest side of the building. Mr. Mandregan (Maintenance Director for the St. Paul School) attended the site reconnaissance with Tetra Tech personnel. The interior of the building was inspected and consisted of classrooms, including a science laboratory, a library, a maintenance shop, a garage, and a basement used as a weight room and for storage. Mr. Mandregan noted that small amounts of hazardous chemicals such as cleaning supplies, paint, paint thinner, and chemicals used in the science laboratory were all kept in flameproof, metal, hazardous materials cabinets. The site reconnaissance confirmed this information. Appendix C contains a summary of the types of chemicals stored in the science laboratory. The quantity of stored chemicals was not reviewed during the inspection, but generally, chemical quantities were limited to small jars containing several hundred grams of various powders and liquids.

Mr. Mandregan stated that vehicles were sometimes repaired or stored in the garage. Cleaning chemicals were observed in the garage during the site reconnaissance; no evidence of chemical spills or staining was observed, however. Insulation was noted on piping in the basement of the school at the subject property.

4.2 CURRENT DISPOSITION OF ADJACENT PROPERTIES

Purpose and Scope: During an ESA, properties adjacent to the subject property are inspected for signs or conditions that could pose significant potential for environmental contamination on the subject property due to lateral migration of surface or subsurface contaminants from those properties. The review of adjacent properties is limited as recommended by ASTM Practice E-1527-00, and information relating to those properties provided herein should not be interpreted as comprehensive or conclusive, unless otherwise noted.

Observations: The subject property is located in an area zoned as institutional. Adjacent properties are zoned as open space to the east, residential to the south, residential and commercial to the west, and commercial to the north. The surrounding properties were visually examined from the subject property and public roads. Property to the east appeared to be undeveloped except for a basketball court. Two residences exist to the south. Tolstoi Boulevard, the St. Paul Clinic, and the King Eider Hotel exist to the west. Bartlett Boulevard and the A/C Value Center general store exist to the north.

4.3 INTERIOR STORAGE AND WASTE DISPOSAL AREAS

Purpose and Scope: During an ESA, interior storage areas are examined for staining or other evidence of former activities that could present a potential for environmental contamination. Containers of chemicals are examined for content and usage, and trash or rubbish accumulation is noted. In addition, designated interior disposal areas and areas conducive to waste disposal are examined for evidence of improper disposal. Finally, restrooms, drains, exterior doors, and secluded closets are visually inspected.

Observations: The school contained small amounts of cleaning supplies, paint, paint thinner, and science laboratory chemicals. All were contained in flameproof, metal, hazardous materials cabinets.

4.4 INTERIOR DISCHARGES

Purpose and Scope: During an ESA, interior discharge areas, such as drainage areas, pipe discharges, sumps, and air emission generators, are visually examined for leakage or other evidence of potential environmental contamination.

Observations: No evidence of leaks to discharge areas was observed inside the school on the subject property. The sewage system discharges into the town's main sewage line, ultimately discharging into the Bering Sea near East Landing. During the July 27 visit, Tetra Tech was informed that science laboratory chemicals commonly are disposed by diluting them with tap water and discharging them into sink drains, which discharge into the city's treatment system and ultimately into the Bering Sea.

4.5 EXTERIOR STORAGE AND WASTE DISPOSAL AREAS

Purpose and Scope: During an ESA, exterior storage and waste disposal areas are visually inspected for signs of releases or other environmental contamination associated with historic activities. Visual and olfactory evidence of chemical or other release are noted at designated storage areas and locations suggestive of storage operations such as concrete or asphalt pads, covered or fenced areas, pits, ponds, and lagoons.

In addition, exterior waste disposal areas are examined, including garbage cans and dumpsters. Areas of stained or off-color soil, stressed vegetation, discarded empty containers, and burned residue are inspected, as are remote or obscured areas of the property conducive to dumping.

Observations: No evidence of exterior storage or waste disposal was observed during the site reconnaissance.

4.6 EXTERIOR DISCHARGES

Purpose and Scope: During an ESA, exterior subsurface structures are inspected for evidence of leaks, releases, or other environmental contamination associated with historic activities. The presence of subsurface structures that collect or contain liquid and sediment may represent a source of potential environmental contamination. Areas that are inspected if present include underground voids and vaults,

drains, sumps, oil/water separators, wells, pits, ponds, lagoons, and aboveground structures indicating subsurface activity.

Observations: No evidence of exterior discharges or waste disposal was observed during the site reconnaissance.

4.7 STORAGE TANKS

Purpose and Scope: The presence of current and historic aboveground storage tanks (AST) and underground storage tanks (UST) at the subject property is carefully evaluated during an ESA. Storage tanks are recognized as major potential sources of environmental contamination. Contamination of soil and/or groundwater may occur as a result of spills, overfills, or releases from tank systems. Such contamination would require remediation, and the property owner or operator could be responsible for remediation costs.

Observations: Currently, one 3,000-gallon, skid-mounted, double-walled, steel AST is present at the subject property; according to historical information and interviews, the tank is used to store diesel fuel used for heating the school. To his knowledge, Mr. Mandregan is not aware of any spills or contamination related to the existing AST. During the site reconnaissance, Tetra Tech did not observe any evidence of spills or overfills at the AST.

Mr. Mandregan stated that the AST replaced a UST, presumably when the school was constructed in 1971, or after the 1978 fire. However, interviews with village elders conducted by Phyllis Swetzof (City Clerk for the City of St. Paul) were less conclusive. Several individuals stated that the UST was not removed, others stated that it had, and others did not know. The location, size, and other details regarding the UST could not be determined through exhaustive interviews with persons knowledgeable about the history of St. Paul Island. Because the UST would not have been regulated until 1988, when the UST regulations codified at Title 40, Code of Federal Regulations, Parts 280 and 281, were issued, and because the tank's use had been discontinued by that time, regulatory reviews did not identify the presence of this tank system.

No other USTs or ASTs are known to have existed at the subject property.

4.8 POLYCHLORINATED BIPHENYLS

Purpose and Scope: The subject property was inspected for items that potentially may contain PCBs such as transformers and other electrical equipment.

Observations: City officials were not aware of PCBs ever being used on the subject property. No equipment suspected to contain PCBs was identified at the subject property during the site reconnaissance.

SECTION 5

REGULATORY RECORDS REVIEW

A regulatory records review was conducted through phone interviews with regulatory officials and by consulting available databases provided by the U.S. Environmental Protection Agency and the Alaska Department of Environmental Conservation (ADEC). According to interviews, the subject property is not part of any regulatory action. Databases that were searched include the following.

Federal Records

- **Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS):** CERCLIS contains data on potentially hazardous waste sites that have been reported to the EPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites that are either proposed to or on the National Priorities List (NPL) and sites that are in the screening and assessment phase for possible inclusion in the NPL.
- **CERCLIS-No Further Remedial Action Planned (CERCLIS-NFRAP):** As of February 1995, CERCLIS sites designated “No Further Remedial Action Planned” have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or contamination was not serious enough to require Federal Superfund action or NPL consideration.
- **NPL:** The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the federal Superfund program.
- **Delisted NPL:** The National Oil and Hazardous Substances Pollution and Contingency Plan establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425(e), sites may be deleted from the NPL where no further response is appropriate.
- **Corrective Action Report (CORRACTS):** CORRACTS identifies hazardous waste handlers with Resource Conservation and Recovery Act (RCRA) corrective action activity.
- **Resource Conservation and Recovery Information System (RCRIS):** RCRIS includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA.
- **Emergency Response Notification System (ERNS):** ERNS records and stores information on reported releases of oil and hazardous substances.

State of Alaska Records

- **Contaminated Sites Database:** The Contaminated Sites Database is the State equivalent to CERCLIS. Sites contained in the CSCSL may or may not already be listed on the Federal CERCLIS list.

The subject property was not listed in any of the above listed databases.

A review was conducted of available Department of Environmental Conservation records for listed sites within 0.25 mile of the subject property and for sites with groundwater contamination located within 1 mile of the subject property. Results of the file review are presented in the table below. Eleven listed sites (ADEC CSD) were identified within a 1-mile radius of the subject property. Three of the listed sites are classified with a closed status by ADEC (Two-Party Agreement [TPA] Sites 08, 09a, and 10). In addition, five facilities within 1 mile of the subject property were listed in the federal RCRIS database.

Site Name/Address	Site Type	Distance from Subject Property	Comments/Status
TPA 07 St. Paul NMFS Fuel Barges	Suspected Contaminated Soil	<¼ mile northwest	Suspected contamination associated with fuel barges that were grounded with product on board. As of December of 2001, the ADEC site file was closed.
TPA 08 St. Paul NOAA Cliffside Landfills	Landfills	¼ to ½ mile south	Two landfills (NOAA and NMFS) formerly operated along cliffs south of subject property. ADEC site file lists this as closed under ADEC Contaminated Sites Database as of December 2001.
Clinic Underground Storage Tank (UST) SP-1	UST	~ 400 feet west	Heating oil UST was removed from the St. Paul Clinic. According to the ADEC database, site contamination has been removed, but the site cannot be closed until the excavated soils (now stockpiled at the Blubber Dump) are remediated. The ADEC site file is still active as of April 2004.
TPA 09 St. Paul Tract 46 Industrial Area	Contaminated Soil	~¼ northwest	According to ADEC, site contamination has been removed to the maximum extent practicable even though residual contamination remains in site soil. As of April 2003, ADEC has issued a conditional determination of no further remedial action or sampling required. The ADEC site file is still active.
TPA 09a St. Paul USTs Site (Tract 46)	UST	~¼ mile northwest	Six USTs located near new harbor (the old movie theater building). As of May 2003, ADEC issued a determination of no further remedial action or sampling required.

Site Name/Address	Site Type	Distance from Subject Property	Comments/Status
TPA 09b St. Paul Power Plant (Tract 46)	UST	~¼ mile northwest	Diesel fuel contamination in soil as a result of USTs during past power plant operations. As of March 2001, the ADEC site file is active.
TPA 09c St. Paul Municipal Garage	UST	~¼ mile northwest	Diesel fuel UST. As of April 2004, the ADEC site file is still active.
TPA 09d St. Paul Municipal Drum Staging Area	Drums	~¼ mile northwest	Diesel fuel and kerosene contamination associated with former fueling operations. As of April 2004, the ADEC site file was active.
TPA 09e St. Paul Contaminated Saltwater Wells	Saltwater wells	~¼ mile northwest	Saltwater wells previously used to wash seal skins were abandoned due to reported diesel contamination from spills at the demolished diesel tank farm.
TPA 10 St. Paul Former Gasoline Tank Farm Hill on Village East Side	Above-ground Storage Tank (AST)	¼ to ½ mile northwest	Contamination associated with four 25,000-gallon ASTs. As of February 2000, the ADEC site file was closed.
TPA 11 St. Paul Demolished Diesel Tank Farm Tract 43 St. Paul	AST	¼ to ½ mile northwest	Diesel fuel tank farm decommissioned in 1988. Six 80,000-gallon ASTs that were associated with large spill in 1968 resulting in fish kill were removed. As of May 2001, the ADEC site file is active and includes groundwater monitoring of the area.
M/V All Alaskan St. Paul Island Vessel North Shore	RCRIS	< ½ mile north	Identification number AKD983075904
St. George Delta Fuel Waterfront Building	RCRIS	< ½ mile north	Identification number AKR000000885
St. Paul City Port 300 Dock Side Road	RCRIS	< ½ mile north	Identification number AKR000000489
St. Paul Delta Fuel Company Waterfront Building	RCRIS	< ½ mile north	Identification number AKR000000893
Unisea Incorporated Northwest Harbor Arm Village Cove	RCRIS	< ½ mile north	Identification number AK0000244053

SECTION 6

CONCLUSIONS AND RECOMMENDATIONS

The results of this ESA represent a review of current conditions, based on available information and limited observations, as described in previous sections of this report.

The first known use of the property began prior to 1948, when the Butler Building, a carpenter shop, was in existence on the property. The Butler building was converted into a plumbing shop in the 1950s and was demolished in 1967. In 1971, the school building was constructed on the property. Around 1978, the school building was partially destroyed in a fire and was subsequently rebuilt into the school building that currently exists on the property. No other activities are known to have occurred on the subject property. The property has contained a UST and currently contains an AST used to store diesel heating oil.

Conduct of lead-based paint and asbestos surveys is outside the scope of a Phase I ESA. No evidence of the presence of these materials was identified during the site reconnaissance. However, due to the age of the building materials used in the construction of the school, asbestos and lead-based paint may be present in the school.

Tetra Tech performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-00 of Block 17, Lots 9, 10, 11, 12, 13A, 14A, and 15A, Tract A, all within Section 25, Township 35S, Range 132W. According to NOAA, this property boundary is preliminary and is still under negotiation. The ESA was conducted based on site boundaries presented in the NOAA Statement of Work dated March 22, 2004.

The assessment revealed the presence of two recognized environmental conditions in connection with the property.

- According to persons interviewed during the Phase I ESA, small quantities of chemicals associated with the science laboratory are diluted and discharged through sink drains, which ultimately discharge to the Bering Sea.
- According to persons interviewed during the Phase I ESA, the ultimate disposition of a diesel fuel UST cannot be determined. Several village elders interviewed by the City Clerk on behalf of the site assessor mentioned that the UST may have been abandoned in place. Others believe that UST has been removed.

SECTION 7 LIMITATIONS

This report was compiled based partially on information supplied to Tetra Tech from outside sources and other information in the public domain. The conclusions and recommendations herein are based on the information Tetra Tech obtained in compiling the report. This information is on file at Tetra Tech's office in Mountlake Terrace, Washington. Tetra Tech makes no warranty as to the accuracy of statements made by others, which may be contained in the report, nor are any other warranties or guarantees, expressed or implied, included or intended by the report except that it has been prepared in accordance with the current generally accepted practices and standards consistent with the level of care and skill exercised under similar circumstances by other professional consultants or firms performing the same or similar services.

Because the facts forming the basis for the report are subject to professional interpretation, differing conclusions could be reached. Tetra Tech does not assume responsibility for the discovery and elimination of hazards that could possibly cause accidents, injuries, or damage. Compliance with submitted recommendations or suggestions does not assure elimination of hazards or the fulfillment of client's obligations under Federal, State, or local laws or any modifications or changes to such laws. None of the work performed hereunder shall constitute or be represented as a legal opinion of any kind or nature but shall be a representation of findings of fact from records examined.

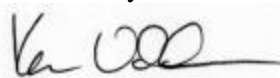
The depth of this investigation is confined to the above-listed scope of work. Hazardous materials or coatings may be masked by building materials, buried beneath the ground surface, or concealed in an otherwise undetectable manner. Tetra Tech has exercised due diligence in the conduct of this Phase I ESA but makes no warranty regarding the presence or absence of concealed features that could not be documented at the time the Phase I ESA was conducted.

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APPENDIX A
SITE PHOTOGRAPHS

St. Paul School
St. Paul Island, Alaska



Photograph No. 1

Orientation: East

Description: Looking east at the playground from the parking lot adjacent to the school property.

Site: St. Paul School

Date: April 20, 2004



Photograph No. 2

Orientation: South

Description: Looking south at the above ground storage tank located adjacent to the school building on the property.

Site: St. Paul School

Date: April 20, 2004



Photograph No. 3
 Orientation: West
 Description: Looking west from the subject property.

Site: St. Paul School
 Date: April 20, 2004



Photograph No. 4
 Orientation: North
 Description: Looking north at the subject property. The school is visible in the foreground, and the A/C Value Center general store is located in the distance.

Site: St. Paul School
 Date: April 20, 2004



Photograph No. 5

Orientation: N/A

Description: Cleaning supplies and chemicals stored in the St. Paul School garage.

Site: St. Paul School

Date: April 20, 2004



Photograph No. 6

Orientation: N/A

Description: Chemicals stored inside the locked chemical storage cabinet in the St. Paul School science laboratory.

Site: St. Paul School

Date: April 20, 2004

APPENDIX B
HISTORICAL PHOTOGRAPHS

St. Paul School
St. Paul Island, Alaska



St. Paul Village, 1996



0 375 750 1,500 Feet

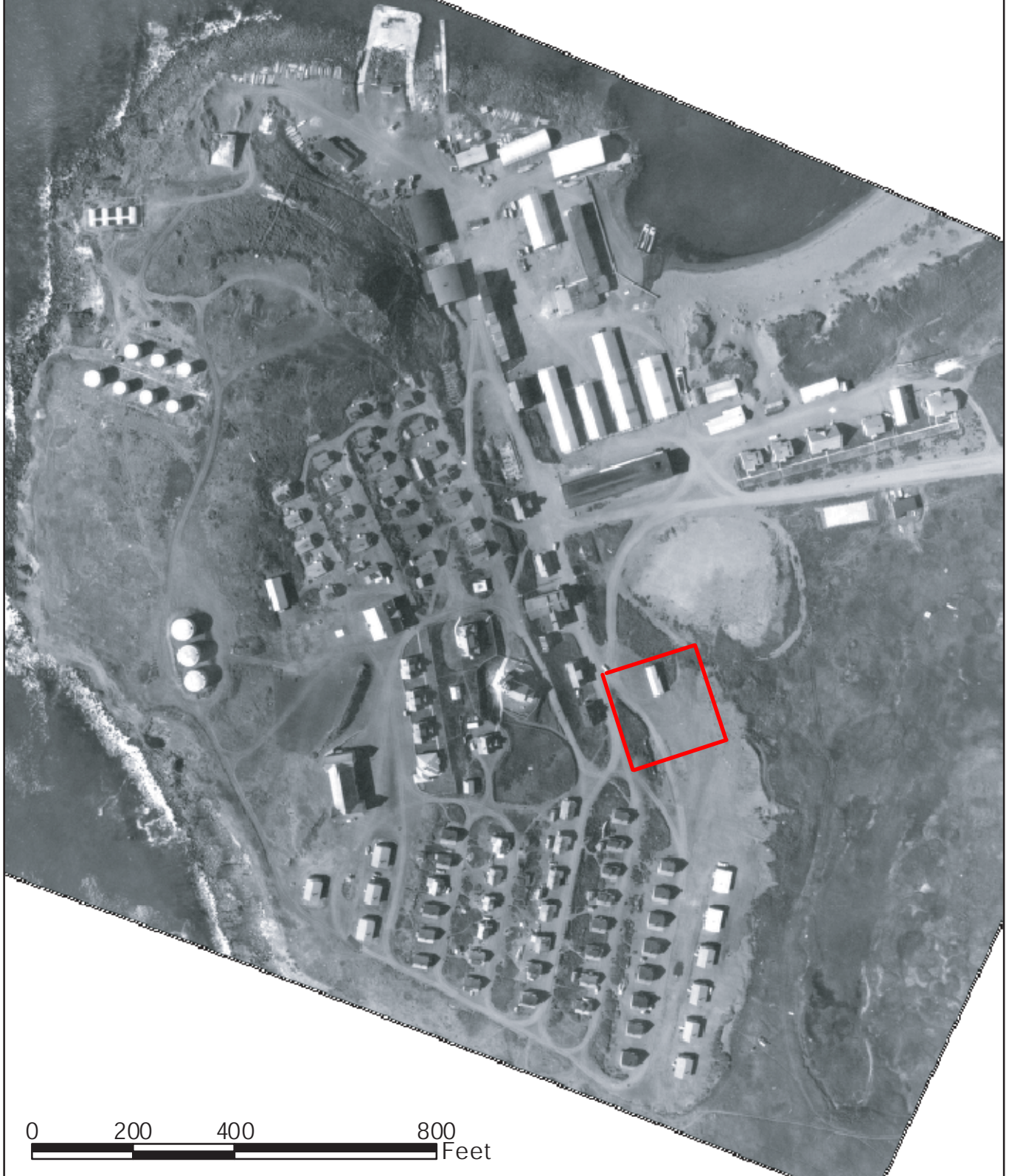
St. Paul Village, 1982



St. Paul Village, 1973



St Paul Village, 1967



0 200 400 800 Feet



St. Paul Village, 1948



0 200 400 800 Feet

APPENDIX C
CHEMICALS IN SCIENCE LAB

St. Paul School
St. Paul Island, Alaska

Chemical	Form	Quantity
2,6-Dichlorindophenol	crystal sodium deriv.	1
	10% liquid	1
	powder (pure)	1
Aluminum Hydroxide	powder	1
Aluminum Oxide	powder	1
Aluminum Sulfate	powder reagent	
Ammonium Acetate	crystal reagent	1
Ammonium Chloride	granular	1
Ammonium Sulfate	granular	1
Ammonium Thiocyanate	crystal (pure)	1
Barium Chloride	reagent	1
Barium Nitrate	crystals	1
Benedict's Reagent	powder	1
Boiling Chips & Stones	chips	2
Boric Acid	granular	1
Bromothymol Blue	liquid	1
Calcium Carbonate	precipitated powder	1
Calcium Chloride	granular	1
Calcium Hydroxide		
Calcium Oxide (lime)		
Calcium Phosphate		
Calcium Turnings	pure	1
Carbon Tetrachloride	liquid XXX (carcinogen)	1
Copper	granular	1
Copper Sulfate	liquid	1
Cork Dust		
Cupric Nitrate	crystal	
Cupric Nitrate	trihydrate crystal reagent	
Cupric Sulfate	purified crystals	
Cupric Sulfate	granular	
Epinephrine	powder	
Ferric Nitrate	Nonahydrate crystal	1
Ferric Sulfate	powder reagent	1
Ferrous Chloride	crystal reagent	1
Ferrous Sulfate	crystal, pure	2
Food Coloring	Red, Yellow, Blue, Green	6
Glucose-1-Phosphate	powder	1
Iodide	crystal reagent	1
	reduced powder	1
Iron	technical powder	1
Isopropyl Alcohol	liquid	1
Lactic Acid	liquid	1
Lead	granular	1
	crystal reagent	1
	metal ribbon	3 pkgs.

Chemical	Form	Quantity
Magnesium Sulfate	anhydrous powder	1
Manganese Dioxide	85% powder	1
Mercuric Oxide	powder	1
Mercuric	liquid	1
Methylene Blue	1% aqueous	1
Nickel Sulfate (hexahydrate)	crystal, pure	1
Paraffin Oil	white liquid	1
Phenolphthalein	in 70% alcohol	2
Phenylthalein		
Potassium Bromide	crystal	1
Potassium Carbonate	crystal	1
	powder	1
		1
Potassium Chloride	crystal	1
Iodide	pellets	2
		1
	reagent	1
	5% liquid	1
	crystals	2
Potassium Permanganate	crystal	1
Silver Nitrate	crystal reagent	1
	anhydrous powder reagent	1
	crystal	1
	anhydrous powder & crystal	2
Chloride	salt crystals	1
Sodium Dichromate	dihydrate crystal reagent	1
Sodium Hydroxide	pellets	3
Sodium Iodide	crystal	1
Sodium Nitrate	crystal reagent	1
	pellets & crystal	
	crystal reagent	
	crystal	
Stannic Chloride		
Stannous Chloride		1
Sulfur		
Zinc		